

fresh male of *Ctenucha cressonana*. "It is, it is, The Cat!!" It presents a fine example of the process, long, quite slender, smooth, with denser but shorter hairs along the tubes and a smaller brush at the ends.

It is not to be supposed that I have secured all the species of moths that have this peculiar structure. Yet for many years I have very regularly tested almost everything that has come in my way. I have found, however, some peculiar features in two or three butterflies. I have examined very few Geometrids. Of the four species certainly known, one is a Bombycid, and three are Syntomids, a family that contains an immense number of species in the lands to the southward.

It is to be hoped that some one familiar with histological work can investigate further. Very fresh specimens will be needed.

The sketches made to illustrate the text are diagrammatic.

A new Nearctic *Gonomyia* (Tipulidae, Diptera).

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The crane-fly herein described as new appears to be rather widely distributed in northeastern North America, but has been confused with previously described forms.

Gonomyia (*Gonomyia*) *mathesoni* sp. n.

Color light brown, the thorax rather indistinctly striped; femora without brown bands; wings nearly hyaline; *Sc* long, extending far beyond the origin of *Rs*; cell 1st *M*₂ open by the atrophy of the outer deflection of vein *M*₃; basal deflection of *Cu*₁ far before the fork of *M*.

Male.—Length, 5.5-2 mm.; wing, 6-6.1 mm. Female.—Length, 6.6-6.8 mm.; wing, 6.3-7 mm.

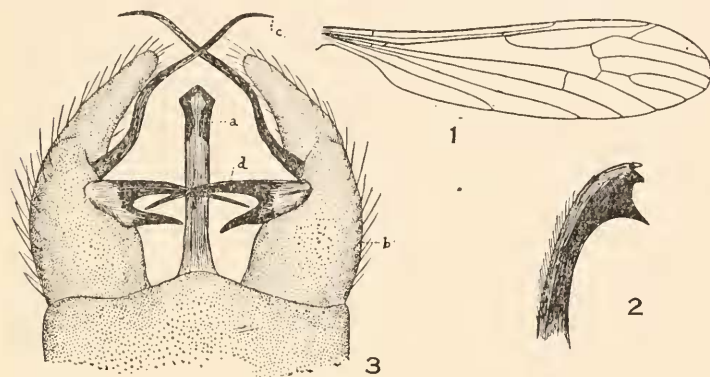
Rostrum and palpi dark brownish black. Antennae rather short, the three basal segments light yellow, the remaining segments brownish. Front white, the vertex more yellowish, the region adjoining the eyes behind more brownish.

Pronotum pale, whitish. Mesonotal praescutum light yellowish brown with indistinct darker brown stripes behind, one on either side of the rather broad median area, these extending from the transverse suture to the proximal ends of the pseudosutural foveae; lateral mar-

*Contribution from the Entomological Laboratory of Cornell University.

gins of the sclerite broadly white; in alcoholic specimens four stripes show on the praescutum, the elongated median one being subdivided by a narrow line; scutum light yellowish brown with a large rounded brown spot on each lobe; scutellum and postnotum reddish brown. Pleura pale brown and white, the brown being in the shape of a broad band extending from the cervical sclerites to the postnotum; sternites brown. Halteres rather long, pale yellowish brown.

Legs with the coxae and trochanters light yellow, remainder of the legs light yellowish brown, the tarsi a little more infuscated.



Gonomyia (Gonomyia) mathesoni n. sp.

Fig. 1.—Wing. Fig. 2.—Hypopygium, lateral aspect of the penis guard.
Fig. 3.—Hypopygium, ventral aspect. a penis guard; b pleura; c dorsal apical appendage; d ventral apical appendage.

Wings hyaline or nearly so, stigma barely indicated, veins pale yellowish brown. Venation: (see text figure 1) *Sc* long, extending to about midlength of *Rs*; *Rs* elongated, arcuated; *R2 + 3* subangulated at the proximal end of the stigma; basal deflection of *R4 + 5* usually angulated; cell 1st *M2* open by the atrophy of the outer deflection of vein *M3*; basal deflection of *Cu1* far before the fork of *M*, this distance being longer than the deflection.

Abdominal tergites brown, narrowly and indistinctly margined on the lateral and caudal edges with dull yellow; sternites dull yellow. Male hypopygium (see text figure 3) with the ninth pleurite (*b*) enlarged at the base, at the apex produced caudad into an elongate, fleshy lobe, pale in color and provided with numerous hairs; the ventral inner face of the pleurite is provided with two appendages, the dorsal one (*c*) very long, slender, simple, twisted, pale and blackened at the tip; the ventral appendage (*d*) is bifid, the outer arm over twice as long as the short cephalic inner arm; in a position of rest both of these appendages are decussate. Penis-guard (*a*) viewed from the side (see text figure 2) elongate, bent slightly ventrad, the tip enlarged and provided on the lower surface with four teeth, the

lower pair of which are the larger. Gonapophyses small, pale, feebly chitinized, cylindrical, on the cephalic face at two-thirds the length with a feeble chitinized tooth.

Habitat.—Eastern United States and Canada.

Holotype, ♂, Sacandaga River, Fulton Co., N. Y., June 26, 1914 (Alexander).

Allotype, ♀, topotypic.

Paratypes, 30 ♂, ♀, topotypic. 10 ♂, ♀, Truro, Nova Scotia, July 7 to 26, 1913 (Matheson).

This interesting species has long been confused with *Gonomyia cognatella* O. S., but has little in common with that insect. It is more closely related to *G. blanda* O. S., but is easily separated by the unmarked wings. The cell 1st M^2 open by the atrophy of the outer deflection of vein M^3 is found only in *cognatella*, *blanda* and *mathesoni* in Eastern North America. These three species may be separated as follows:

1. Basal deflection of *Cu1* at the fork of *M*; *Sc* short ending just before the origin of *Rs*. *cognatella* O. S. *

Basal deflection of *Cu1* far before the fork of *M*; *Sc* long, ending beyond the origin of *Rs*. 2.

2. Wings spotted.

blanda O. S. †.

Wings unmarked.

mathesoni sp. n.

This species is named in honor of the collector of the paratypes from Nova Scotia, Dr. Robert Matheson, of Cornell University.

The insect, both in New York and in Nova Scotia, is found on rich vegetation along the banks of rivers. The Tipulidae found in association with this species include the following: *Antocha saxicola* O. S., *Cryptolabis paradoxa* O. S., *Rhabdomastix* (*Sacandaga*) *flava* Alex., *Gonomyia sulphurella* O. S., etc.

* *cognatella* Osten Sacken; Proc. Acad. Nat. Sci., Phila., 1859, 230; Monographs of the Diptera of North America, IV, 1869, 181, pl. IV, fig. 18 (male genitalia); 23rd Report N. Y. State Entomologist, 1907, Needham, Crane-flies of New York, pl. 24, fig. 4 (wing).

† *blanda* Osten Sacken; Proc. Acad. Nat. Sci. Phila., 1859, 231; Monographs of the Diptera of North America, IV, 1869, 182, 183, pl. IV, fig. 17 (male genitalia); 23rd Report N. Y. State Entomologist, 1907, Needham, Crane-flies of New York, pl. 24, fig. 5 (wing).